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ABSTRACT

This study identified patterns in general education teachers' accommodations for students with disabilities, focusing on grouping practices, teacher expectations, and modifications. These patterns were examined in order to provide a multivariate description of integration practices on which to base practice and policy decisions. Twenty-two elementary, middle, and high school students with disabilities were each observed throughout 5 school days, and all 50 teachers serving this group were interviewed. Principal components analysis of the data identified three dimensions: a first dimension revealed differences between content and special area teachers in their use of large group instruction and reliance on special education teacher modifications; a second dimension showed differences in types of small group instruction and modifications used by elementary and secondary teachers; a third dimension revealed that teachers with different types of expectations made different use of modifications and grouping practices. Implications for practice, research, and policy are discussed. (Contains 24 references.) (Author/PB)

Patterns of Accommodations Provided to Students with Disabilities in Integrated Classrooms

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Abstract

This study identified patterns in three facets (grouping practices, teacher expectations, and modifications) of general education teachers' accommodations for students with disabilities. These patterns were sought in order to provide a multivariate description of integration practices on which to base practice and policy decisions. Twenty-two students with disabilities were each observed for five entire school days, and all of their teachers were interviewed. A sample of 50 teachers was drawn, consisting of all of their special area and matched content area teachers. Semi-structured observation and interview data were coded, using categories derived from the data. Principal components analysis of the coded data identified three dimensions. A first rotated dimension revealed differences between content and special area teachers in their use of large group instruction and reliance on special education teacher modifications. A second rotated dimension showed differences in the types of small group instruction and modifications used by elementary and secondary teachers. The third rotated dimension revealed that teachers with different types of expectations made different use of modifications and grouping practices. Implications for practice, research, and policy are discussed.

Recent policy initiatives have encouraged educators to include students with disabilities in general education programs (Will, 1986). The goals of Will's Regular Education Initiative, or REI, include general education teachers taking increased responsibility for all students and the provision of an appropriate education in an integrated setting.

Debate about the REI centers on general education teachers' ability to accommodate the individual needs of students with disabilities. Accommodation, in this debate, subsumes three activities (Fromberg & Driscoll, 1985): 1) use of small group and/or individualized instruction as opposed to large group instruction; 2) differentiated expectations (e.g., standards, goals, curriculum) for students with disabilities; and 3) modifications for students with disabilities (e.g., clearer directions, modified assignments, testing modifications).

In the sections that follow, we briefly summarize the literature regarding each of these three accommodation practices. We then discuss general limitations to this literature, and finally detail the goals of this study. Before beginning this review, we briefly summarize the purpose of the present research, to orient the reader.

This study was designed to describe general education teachers' accommodation of students with disabilities. The present research can be characterized as more comprehensive than previous research in several ways. This study included both content area and special area teachers across elementary, middle and high school settings, in order to examine grade and subject matter effects. It used classroom observations to document actual practices and teacher interviews to examine expectations and modifications, which are often not visible. Finally, the present research was multivariate in approach, seeking to establish links and interactions among the three facets of accommodation (grouping practices, teacher expectations, and modifications).

Grouping Practices

Small group or individualized instruction is desired in integrated settings under the assumption that instruction geared to the whole class is not likely to meet the individual needs of students with disabilities. Small cooperative groups and/or peer tutoring have been effective for students with disabilities in integrated settings (Jenkins, Jewell, Leicester, O'Connor, Jenkins & Troutner, 1994; Slavin, 1984; Stevens, Madden, Slavin & Farnish, 1987). Small group instruction is usually a feature of direct instruction, which is often viewed as effective for students with disabilities (Carnine, Silbert, & Kameenui, 1990) In a review, Polloway, Cronin, and Patton (1986) concluded that small group and individualized instruction were equally effective for students with disabilities.

Despite evidence supporting small groups, observational studies of reading and math (Baker & Zigmond, 1990) and science and social studies (McIntosh, Vaughn, Schumm, Haager, & Lee, 1994) general education classrooms found that large group instruction was the norm. Small group or individual instruction were rarely observed to occur. These studies are limited in that they did not attempt to characterize the extent to which grouping structures were collaborative, although cooperative learning has been central to documenting the efficacy of small groups in inclusive settings.

Differentiated Expectations

A second facet of accommodation is the use of differentiated expectations in general education settings. Because of their individual learning needs, students with disabilities may not be able to master all of the general education curriculum. Differentiated expectations may be operationalized in any of three ways. 1) Teachers may ask all students to complete the same task,

but have different standards with which to evaluate different students. 2) Teachers may set different goals for the same task; e.g., participation in the same task may allow students with disabilities to meet social goals while general education students accomplish academic goals. 3) Teachers may use more than one curriculum in their general education classroom.

The special education community appears split in its discussion of the appropriateness or feasibility of a differentiated curriculum within the general education classroom. Jenkins, Pious and Peterson (1990) argued that general education teachers should only be expected to be responsible for students with disabilities who can profit from the standard, developmental curriculum. In response, Thousand and Villa (1991) suggested that a more modern view of curriculum, emphasizing work place preparation, habits of mind, and community referenced learning actitivies, would be broad enough to encompass all students.

We could not locate any research that addressed the extent to which general education teachers varied their expectations for students with disabilities. Several studies noted that use of a differentiated curriculum was rare (Jenkins & Leicester, 1992; Schumm, Vaughn, Gordon, & Rothlein, 1994). York, Vandercook, MacDonald, Heise-Neff and Caughey (1992) reported that general education teachers at the middle school level had difficulty designing learning activities which were appropriate to students with severe disabilities as well as normally achieving peers.

Modifications

A third facet of accommodation is modifications to instruction, testing, or assignments. While it is argued that general education teachers need to modify their practices to accommodate the diverse needs of students with disabilities, observational studies have documented that such modification seldom occurs (Baker & Zigmond, 1990; McIntosh et al., 1994).

Similarly, several studies using teacher questionnaires reported few modifications for students with disabilities in general education classes. The majority of teachers surveyed by Ammer (1984) reported that they made almost no modifications for mainstreamed students. When asked about the feasibility of potential modifications, teachers characterized those that did not require individualization as most feasible, while modifications of materials and providing individualized instruction were viewed as least feasible (Schumm & Vaughn, 1991). General education teachers reported feeling ill-prepared to make modifications for students with disabilities (Semmel, Abernathy, Butera, & Lesar, 1991) or to modify instruction for students with disabilities (Schumm & Vaughn, 1992). Teachers typically preferred modifications such as reduced class size, increased support services, and assistance of a paraprofessional, which are matters of administrative rather than teacher control (Myles & Simpson, 1989).

General Limitations to the Accommodations Literature

Several general limitations can be identified in the existing research that documents general education teachers' use of accommodation practices. These include limitations in samples, data collection, and data analysis.

Some studies were limited in that they utilized only survey methodology (e.g., Ammer, 1984; Schumm & Vaughn, 1991). These studies did not document through observations the practices teachers actually employed.

We identified only two studies where observations were made of general education teachers' practices; both of these studies were limited by restricted samples. Baker and Zigmond (1990) observed reading and math instruction provided by 12 elementary teachers. McIntosh et al. (1994) used a larger sample of 60 elementary, middle and high school general education

teachers, but they restricted their observations to science and social studies classes. These sampling decisions restrict generalizations about accommodations to narrowly defined disciplines and/or grade levels.

A final limitation to the previous research is that it is typically univariate in data analysis procedures, focusing on one or two of these accommodations, rather than examining links across grouping practices, teacher expectations, and modifications (e.g., Ammer, 1984; Myles & Simpson, 1989; Schumm & Vaughn, 1991). Understanding the interrelationships among accommodations would provide a richer and more coherent understanding of general education teachers' practices, and provide a sounder basis for identifying exemplary practices in integration or practices in need of change in order for students to be well served in integrated settings.

Purposes of the Present Study

In summary, extant research provides documentation that general education teachers tend to make few accommodations for students with disabilities in general education classes. That is, general education teachers seldom provide opportunities for instruction geared to individual student needs, such as small group or individualized instruction, differentiated expectations, or modifications.

However, previous research leaves unanswered several questions which were addressed in the present investigation. A primary goal of the present study was to determine how the three facets of accommodation (grouping, expectations, and modifications) were linked. That is, we examined whether there were patterns of accommodation or lack of accommodation that could be identified. Predictable patterns of accommodation would provide a richer understanding of integration practices, and a multi-dimensional description of needs on which to base practice and

policy decisions. For example, large group instruction might be viewed as appropriate for students with disabilities if its use were associated with modifications or differentiated expectations.

Another question examined for the first time in this investigation was whether different groups of general education teachers (e.g., teachers of different grade levels or subject areas) were more successful than others in accommodating students with disabilities. We examined accommodations made by elementary, middle school and high school teachers, in order to assess whether teachers at different levels made different types of accommodations for students with disabilities.

We also included in our sample all of the teachers who taught students with disabilities, that is, content area and special area teachers. This choice was guided by the landmark description of general education programs, "A Study of Schooling," in which Goodlad (1984) reported: "again and again we found the arts, physical education, and vocational education differing in various ways from the four subjects usually considered essential for college admission--English, mathematics, social studies, and science. The differences often were small or subtle, but they kept reappearing and steadily adding up" (p. 114). Since "A Study of Schooling" did not collect data regarding students with disabilities, the present study documented how content and special area instruction were experienced by these students.

There were other reasons why it seemed particularly important to study special area classes. Many students with disabilities are included with general education students in special area classes (Dragone & Meyer, 1983; Garrett, 1983), but relatively little description of these classes is available (Garrett, 1983). Second, recent school reform initiatives linking school to

work emphasize the need for schools to go beyond traditional content area knowledge to develop a broad range of student outcomes (Secretary's Commission on Achieving Necessary Skills, 1992). Finally, the special area class is routinely quite heterogeneous. In fact, it may be more heterogeneous than many content area classes since many students have extra instruction and/or experience outside of school in music, sports, art, or technology.

Another aspect of accommodation examined in this study was teachers' use of whole class, small group and individualized instructional activities. We examined these grouping practices because small group and individualized instruction are viewed as more conducive to fostering individual pupil growth than whole class instruction (Fromberg & Driscoll, 1985), and in order to address the question of whether whole class instruction can be implemented in such a way that it accommodates the needs of students with disabilities.

We were particularly interested in collaborative small or large group activities, because of the demonstrated effectiveness of cooperative learning, and also because we believed that collaborative structures would better enhance the social integration of students with disabilities than would classes that used parallel independent practice or teacher presentation. This led us to develop a coding scheme that characterized collaborative and other types of small and large group instruction, as well as individualized instruction. This coding scheme permitted us to examine more specific questions about grouping in general education settings than had previously been addressed.

We examined teachers' expectations for students, based on the suggestion that diverse learners can participate if expectations are individualized (Biklen, 1985), and because of the lack of research concerning general education teachers' use of differentiated expectations with students

with disabilities. Using categories derived from the data, we report whether general education teachers' expectations were uniform for all students, whether exceptions were made, or whether expectations were individualized for all students. We felt an understanding of these expectations would clarify teachers' use of large group activities.

A final issue comprehensively examined in this research was the nature of modifications made for students with disabilities in special and content area classes. Our interest in modifications derived from the assertion that often, general education settings must be modified in order to be appropriate for students with disabilities, especially if large group activities are used.

Method

A Mixed Qualitative and Quantitative Approach

Data Collection. The data reported here were gathered as a part of a larger, qualitative description of the entire school day of students with disabilities. This research relied upon two narrative data sources: 1) narrative records of classroom observations of day to day instructional activities, and 2) transcripts of teacher interviews designed to provide insight about the general features of their instruction. Although open-ended, both data collection procedures were structured with broad, pre-specified categories, to insure that data collection was thorough and consistent across observers and interviewers. Classroom observations were recorded as narratives to allow a detailed description of classroom activities and in order not to constrain observers to record only pre-specified events. Similarly, narratives in the form of verbatim transcriptions of teacher interviews provided detailed and unconstrained responses. These data gathering procedures are described in more detail below.

Data Analysis. All of the categories reported here (e.g., small group ensemble) were

derived from the data. Goodlad's theme of differences between content and special area classes emerged from our data. Further, these data revealed more subtleties in grouping practices than the individual, small, and large group categorization used in previous research (e.g., Baker & Zigmond, 1990, McIntosh et al., 1994). Thus, we developed a categorization system that we felt better characterized the purposes of grouping for instruction. Categories of teacher expectations and modifications were also derived from the data.

Data were then converted to quantitative form (e.g., the percentage of a teachers' classes using a small group ensemble grouping pattern). These data were then analyzed using principal components analysis. Principal components analysis (Harris, 1985) was selected since our questions were exploratory in nature, and because we were interested in the structure of relationships among many variables. Also, our sample size was relatively small, thus making common factor analysis methods a less appropriate choice.

Data are presented in two forms. A principal components analysis is reported which identified three dimensions in the data. This is enriched by examples drawn from the narratives.

Sample

Setting. Data were collected in two predominantly white, suburban school districts in the Greater Capital District of New York. One district had made integration of students with disabilities a priority; the other had not. In each district, Pupil Personnel Office staff nominated students with disabilities who represented the range of special education programs available in an elementary, middle and high school.

Students. A group of 22 target students were identified through this process. Four students were nominated in each of the six buildings, but in each high school, one target student

dropped out of school. The teachers of these 22 target students comprised the sample in this study.

These target subjects included one physically handicapped student who received related services only, one pupil who received consultant teacher services, ten resource room pupils, and ten students from self-contained classes. The self-contained classes included a primary class designed to foster language and conceptual development (two students), an elementary and a high school class for youth with emotional needs (one student from each class), three middle/junior high and two high school academic skills development classes. Pupils included one classified as other health impaired (attention deficit/hyperactive), twelve labeled learning disabled, three speech/language impaired, three orthopedically impaired, two emotionally disturbed, and one multiply handicapped.

Teachers. All of the special area teachers who taught these students were included in the sample: five Music, six Art, seven Physical Education, and seven Technology or Home and Careers teachers. Teachers of Technology and Home and Careers were grouped together in order to attain a reasonable size group, and because of some similarity in their subject matter. Art and Physical Education teachers were drawn from both elementary and secondary settings. Music teachers were secondary only, as in both elementary schools the music teachers were on health leave. Home and Careers and Technology were only taught at the secondary level.

For special area teachers who taught only one target pupil, a content area teacher from that pupil's schedule was selected for inclusion in the content area sample. In the case where the special area teacher instructed several target pupils, a content area teacher of one of those pupils was selected for the content area sample. At the secondary level, equal numbers of teachers were

sought from the different content areas.

This matching process was feasible in all but two instances: one target student was not mainstreamed for any content area, so another student's content area teacher was selected, and in one middle school, there were not enough content area teachers to match the special area teachers, so one was selected from the other middle school. This resulted in a content area sample consisting of five Elementary teachers, and five secondary teachers from each discipline: Social Studies, Science, Math, and English.

Because of differences in the number of pupils and the number of teachers they worked with, the teacher sample was not equivalent across levels. It included 12 elementary, 25 middle school, and 14 high school teachers.

Observation Procedures and Instrumentation

The authors of this manuscript (two faculty and three graduate students studying both school and educational psychology) began this investigation by developing a format for structuring classroom observations. This was a detailed outline that would not be completed during observations, but would identify categories of interest and remind observers of the variables they would need to consider during the observation process. Since all of the contributors were experienced educators, we began by brainstorming the aspects of instruction that we believed to be important. After several revisions, the instrument was then tested in trial observations in another school district. The instrument was revised eleven times, in efforts to insure that it was comprehensive, but not redundant, and that it focused on observable indicators of the constructs of interest.

The variables of interest included as major headings on the observation summary outline

were: lesson goal, outcomes fostered, content taught, learning evaluated, teaching strategies, teacher characteristics, collaboration with other teachers and community members, fostering student participation, discipline, unique features of the class, basic student information, student abilities and heterogeneity, and student integration. Within each heading, more specific questions were asked. For example, under lesson goal, follow up items included: what is the lesson goal? does the teacher make it clear? is it written? stated? is it relevant to the student's life? is it functional? is it relevant to the student's IEP? are subject matter and life goals fostered simultaneously? etc. Much of the data collected will not be reported here because it does not bear directly on the topics of interest.

When a satisfactory instrument had been developed, attention was focused on insuring consistency across the graduate students who were observers. In schools not a part of this study, two observers watched the same class, constructed independent narratives, and summarized these using the observation summary format (this procedure is described in the next section). These were then compared by the observers and faculty, and plans devised to generate greater consistency. The observers repeated this process until the observers and faculty agreed that both narratives and summaries were complete and comparable in the data captured.

Each of the 22 target students with disabilities was observed for the full school days on five separate occasions between November and April. One observer was assigned at each level (elementary, middle, and high school). The elementary and high school observers had taught at those levels. The middle school observer had experience as a preschool special education teacher and administrator.

During the observations, the observer took extensive field notes of the lesson presentation,

transcribed classroom dialogue, and recorded events that impacted the target student with disabilities. The lines of the narrative were numbered. Whenever possible, copies of materials used in class were collected.

Each class was later summarized in a semi-structured form, that is, classroom events were organized around the categories of interest outlined in the observation summary form. The summary included reference to lines in the narrative which served as the data source. Observers worked from the narrative to the outline, and from the outline to the narrative, to insure that all events and categories were coded. Once a target student had been observed five times, the five observations of each class were then summarized utilizing the same categories.

Teacher Interview Procedures and Instrumentation

During the process of developing the observation summary, we identified many aspects of instruction that we believed to be important, but that were better assessed through teacher and student interviews. Using these concepts as well as other themes, the structured teacher interview questions were developed by the first two authors of this paper.

Teacher interviews were conducted individually by university faculty and one of the graduate students. They occurred during March, April and May, and lasted roughly one hour. Among other topics, teachers were asked to characterize their instructional goals, use of grouping, and evaluation procedures; they were asked whether they had different standards for different students, to specify any modifications made for the target students with disabilities, and to identify teaching strategies that were especially useful with the target student. All teacher interviews were tape recorded and transcribed verbatim.

Integration of Data Sources

Triangulation of these data sources was begun by the first author developing a preliminary coding system for teacher interview responses of interest for this paper (teacher expectations, modifications, and grouping patterns). Observers then reviewed their observation summaries for confirmation or disconfirmation of these specific interview responses. During this process, it became apparent that the coding system was not sufficiently detailed. All of the authors contributed to a new coding system which was comprehensive (that is, it categorized all of the observed and reported grouping practices, observed and reported modifications, and reported expectations) and integrated (similar categories could be applied, as appropriate, to the observation and interview data sources). Four cycles of revisions to the coding system were made before an adequate coding system was established.

Teachers made comments relevant to the topics of interest for this paper in response to a variety of questions. Therefore, one step in the coding process was that two coders highlighted all pertinent responses on the interview protocols, using a different color for each topic. In a similar fashion, relevant portions of the observations summaries were identified to facilitate coding.

All of the teacher interviews were then coded by one graduate student, using the final coding system. The first author independently coded 40% of the interviews. Inter-rater agreement was 90%.

Once reliability had been established using the new coding system, observers again reviewed their observation summaries for evidence of two features: grouping patterns and modifications. Each observer coded the grouping patterns and modifications in all of their observations, and then an "evidence check" was conducted. For each observer, another author

reviewed all of the narratives and summaries that were the basis for their coding. The observer was asked to justify all coding decisions, and to explain any discrepancies or omissions. This approach was used instead of inter-rater reliability, in order to capitalize on the observer's superior knowledge of these classes.

Variables

Grouping. Observation data were reviewed for evidence of use of whole class, small group, or individualized instruction. These categories were not mutually exclusive, as many teachers were observed using more than one approach to grouping within a single class.

Large group instruction was defined as instruction administered to the class as a whole. Based on the instruction we observed, we identified four types of large group instruction. Large group ensemble activities were defined as activities in which all students collectively produced one product. These were of particular interest, as we believed that the collaboration required in such a setting would foster social integration of students with disabilities. Large group discussion involved interactive, question and answer activity between the teacher and students, of new or review material. The last two types of large group instruction did not involve student interaction and seemed unlikely to foster acceptance of students with disabilities. Large group parallel independent practice was defined as all students in the class working independently on the same task to each produce his/her own product. Lectures, demonstrations, video large group presentations were grouped together as activities in which all students were passive recipients of new information.

Small group instruction was defined as two or more students working together as equal partners. (Situations utilizing unequal partners, where one student was asked to help the target

student were coded as an instructional modification, peer assistance. These data are described in a subsequent section.) Based on the instruction observed, four types of small group instruction were coded. In small group ensemble activities, all students in the group collaborated to produce one product. Small group stations were identified as situations where students moved around the classroom to and from activity centers. Small group discussion consisted of a small group of students talking about review material. Small group parallel independent practice was defined as students within a group given the same assignment and each working to produce his/her own product.

Individual instruction was defined as one-on-one instruction available to all students in the class from either a teacher or an aide. Special assistance provided to the target student only was considered to be an instructional modification and is reported in a later section.

In the analyses that follow, we report the percentage of a teacher's classes which used these nine instructional grouping patterns. These variables were not mutually exclusive, in that a teacher might use more than one type of grouping for instruction in a single class. Two special area teachers who were observed only once were omitted from analyses using these variables but were included in analyses using interview-derived data.

Expectations. Teachers responses to the interview question, "Do you have different standards for individual students?" were coded into one of three, mutually exclusive categories: uniform expectations for all students, exceptions (to uniform expectations) for some students, and individual expectations for all students. These categories were derived from teacher responses. Observation data were not used to address the issue of teacher expectations, since no behavioral indicators of these expectations were identified. In the analyses that follow, we report

the percentage of teachers holding each of these types of expectations.

Modifications. During the interview, teachers were asked "How have you modified your program to accomodate the target student?" Modifications were defined as teaching strategies that were not used with all students, but instead were provided in response to the particular needs of the target student. Teachers reported use of modifications to directions or seating, instruction, assignments and testing. They also reported relying on special education teacher modifications, an aide's attention, peer help or general education teacher extra attention to the target student with a disability. Some teachers reported they made no modifications.

Observation data were then reviewed for confirmation or disconfirmation of the reported modification. Of the 108 modifications reported, there were 10 instances where a reported observation was disconfirmed (e.g., a teacher reported giving extra help to the student, but was never observed doing so). For an additional 19 reported modifications, the observer could not confidently confirm or disconfirm the reported modification (e.g., the teacher indicated that compared to their other classes, they used a greater variety of activities in the target student's class). This low rate of disconfirmation suggested that teacher reports were generally accurate. Given the relatively high rate of accuracy, and the fact that we could not prove that teachers never provided the modifications they reported, we relied upon reported modifications in our analysis.

In the analyses that follow, we report the percentage of teachers utilizing each of these eight modifications or no modifications. With the exception of teachers who reported making no modifications, categories were not mutually exclusive, as teachers often gave more than one response.

Results

A principal components analysis was conducted using the following variables: subject area (core content area versus special area), school level (elementary, middle or high school), percentage of a teachers' classes observed to use any of the nine grouping patterns described previously, reported use of the nine modifications described previously, and type of expectations employed (uniform, exceptions to uniform expectations, individual expectations). Examination of breaks in eigenvalues revealed that the data would support three components. The principal components coefficients matrix was rotated to simple structure using the conventional varimax method. The rotated components accounted for 42% of the variance in the data. Table 1 presents rotated loadings for each variable on the three components. Given the size of the sample, we considered items that loaded at a level of at least .40. All but three of the variables were associated with one or more components.

Insert Table 1 about here

Principal Component One

As indicated in Table 1, subject area (content versus special area) loaded strongly on this component. Also associated with this component were three observed grouping practices (large group demonstration and discussion, small group discussion), and two types of reported modifications (testing and modifications by the special education teacher). We named this dimension Accomodations Associated with Content and Special Subject Areas.

Grouping Practices. Table 2 indicates that content and special area teachers were

distinguished by their use of two forms of large group instruction. Content area teachers were observed to emphasize large group demonstration and discussion in their instruction. For example, after demonstrating a math algorithm, a teacher would ask students to identify the next step in the procedure as they calculated answers to new problems. In contrast, special area teachers were rarely observed to use large group discussion and were less likely than content area teachers to use large group demonstrations.

Insert Table 2 about here

Given the importance that has been assigned to large group instruction in previous research, we also examined use of large group ensemble and parallel independent practice activities by content and special area teachers, even though these activities did not load on the dimension of Accomodations Associated with Content and Special Subject Areas. The two groups were essentially equivalent in use of large group parallel independent practice activities (50% of content area classes and 43% of special area classes). Large group ensemble tasks, with their collaborative focus, were used more often in special area classes (20%) as compared to content area classes (6%).

Taken together, these data indicated that students with disabilities were more likely to experience large group instructional activities in content area classes than in special area classes. Furthermore, the large group structure that seems most likely to foster inclusion, the collaborative/ensemble large group pattern, occured more frequently in special area classes.

As indicated in Table 1, one type of small group instruction was associated with this

dimension. Table 2 shows that content area teachers were seen to use small group discussion on rare occasions, for example, in English classes students in groups reviewed characters for a literature test and critiqued student essays. Special area teachers were not observed to use small group discussion.

Modifications. Two types of modifications were associated with this dimension which contrasted special and content area teachers (see Table 2). Content area teachers' preference for testing modifications reflects their greater reliance on testing as an evaluation strategy; 88% of content area teachers reported giving tests or quizzes. Reported testing modifications included tests given in the special education classroom, tests read by an aide or special education teacher, extended time, modified content, and supports. Few special area teachers reported making testing modifications (see Table 2), although 45% of them reported using tests or quizzes for evaluation.

The most striking contrast between content and special area teachers was in the extent to which they reported that modifications for the target student with a disability were made by a Special Education teacher. While the majority of content area teachers reported relying on this approach to modifications, no special area teachers gave this response (see Table 2). Of the content area teachers who gave this response, 41% were not specific in the type of accomodation to which they referred, e.g., "he can have help with the resource room teacher." Roughly half indicated that role of the special education teacher was to help students to complete assignments from the general education class, including homework, classwork, reports, lab work, and reading. Only two of these teachers (12%) indicated that they worked with the special education teacher to modify assignments. We interpreted these data to indicate a difference in the way that content and special area teachers took responsibility for students with disabilities.

Principal Component Two

Building level (elementary, middle and high school) loaded strongly on this dimension, as reported in Table 1. Three observed instructional practices loaded on component 2: small group ensemble, small group stations, and small group parallel independent practice. Three reported modifications also loaded on component 2: extra attention from the general education teacher, modifications or attention from an aide, and no modifications. We labeled this dimension Accomodations Associated with Elementary, Middle and High School Teaching.

Grouping Practices. As Table 3 indicates, there were striking differences in the ways that teachers at different levels used small group instruction. Setting aside small group discussion, which Table 2 indicates rarely occured, Table 3 reveals that when elementary teachers in our sample used small group instruction it was in the form of stations and small group parallel independent practice; they did not use collaborative small group ensemble activities. These data suggest that while small group activities at the elementary level may allow the curriculum to be adapted to the level of students with disabilities, small groups may not be of the form that would be most likely to foster social acceptance of these students.

Insert Table 3 about here

Examples of stations included warm-up stations in Physical Education, where students rotated between push-ups, running in place, sit ups, etc, and a kindergarten class, where students visited centers offering art, blocks, computers, music and reading. Examples of small group parallel independent practice included dividing students into squads for hockey drills, allowing

students to work in pairs while they each rated the comfort of chairs according to a checklist, and instances where students did independent worksheets or work on a field trip but were encouraged to ask group members for assistance.

In contrast, secondary teachers who used small group instruction relied almost exclusively on collaborative, ensemble form. Examples of collaborative projects in these classes include science lab work, student pairs who completed a picture book project, baking muffins, performing duets, designing and presenting homeless shelters, and one-on-one basketball games. In addition, we observed rare use of small group parallel independent practice at the middle school level.

Tables 2 and 3 confirm results reported in previous research. Overall, small group instruction was found to be less prevalent than large group instruction.

Modifications. Teachers at the different building levels varied in the modifications they reported providing to the target student with a disability, as summarized in Table 3. Among the interesting results were that extra attention from the general education teacher was a modification that was never reported at the high school level. Elementary teachers reported moderate use of extra attention from the general education teacher or aide.

Making no modifications for the target students with disabilities was reported most often at the secondary level. The interviews of all teachers who reported no modifications were reviewed in order to determine why they did not make modifications.

Six of the ten teachers reported that they did not make modifications for the target student because the student was able to function successfully in the class without modifications. A middle school Physical Education teacher reported "he's pretty much able to do what the average student in the class can do"; a high school Technology teacher noted "he performs at or above the level of

a lot of non-labeled kids." A high school English teacher was enthusiastic "she does everything so well I don't even think of her as handicapped or having special needs from me. She is prepared. she participates. She is a delight."

Two teachers noted that the target students received less attention, and consequently no modifications, because they were quiet and less demanding than other students in their class. A middle school Home and Careers teacher preferred to adapt the curriculum and materials for all students: "if I do modify, it is for everyone, not just (the target student)." Only one middle school Music teacher reported an unwillingness to modify: "I never change my strategy."

Principal Component Three

Use of uniform, exceptions to uniform, and individualized expectations loaded on component 3 (see Table 1). Also associated with this dimension were three large group forms of instruction:ensemble, teacher demonstration, and parallel independent practice. Individual instruction was associated with this component. One modification, extra help from a peer, loaded on component 3. This dimension was labeled Accomodations Associated with Teacher Expectations.

Uniform Expectations. In contrast to what might be predicted from the reports of whole class activities in previous research, only about a quarter of the teachers in this sample reported that they had uniform expectations for all students (see Table 4). For those whose responses were coded in this category, an illustrative response was given by a high school Technology teacher: "All the same standards. All are required to do the same amount of work, the same type of work."

Insert Table 4 about here

Reported use of uniform expectations was associated with greater use of three forms of instruction, which often co-occurred (see Table 4). Uniform expectation teachers were more likely to demonstrate and then assign identical work to all students, who worked in parallel (large group parallel independent practice). Examples of parallel independent practice included students working independently on seatwork, paintings, sewing projects, drafting, and writing in journals. These teachers were more likely to circulate among students as they worked, providing one-to-one instruction to all students (individual instruction).

Individualized Expectations. Roughly one third of the teachers in this sample reported that they held individual expectations for all students in the class, as indicated in Table 4. Teachers characterized these expectations in a variety of ways. One was to link their expectations to the concept of comparison, for example, an elementary Physical Education teacher noted "no one is compared to the next person."

Other teachers' descriptions resembled the IEP process. For example, one middle school Physical Education teacher noted "the pretest tells us the things we need to work on. For each student, we set up a program of weight training, running (etc.) depending on what these students need." In another case, the individual program was controlled by the student. This middle school General Music teacher reported "I let each kid make a schedule and pace, in the number of songs they will complete. As long as they are working ahead, and getting successful results, (I'm satisfied)."

Teachers noted that their individualized expectations would accommodate student talents as well as deficits; a high school Music teacher reported "I modify according to experience for all 16 of them. Sometimes someone who is more advanced will get a more complex assignment to keep everyone moving and motivated."

Teachers who held individualized expectations were more likely to be observed to use large group ensemble activities, where all students collaborated to produce a single product (see Table 4). Examples of large group ensemble activities include playing a game of floor hockey, practicing holiday songs, and planning a music video.

These teachers were least likely to use large group demonstration. They made moderate use of large group parallel independent practice.

Teachers who individualized expectations were most likely to report that they modified assignments for the target student with a disability (see Table 4). Across the total sample, a variety of modifications to assignments were reported, including extra time for classwork and/or homework; and modified content for written assignments, especially long term assignments. Other teachers reported that they tailored the curriculum and/or tasks to accommodate student needs. One Art teacher did some of the work for a student.

Exceptions to Uniform Expectations. Slightly less than half of the teachers in this sample reported that they made exceptions to their expectations for some students, as indicated in Table 4. Their comments revealed that teachers generally expected all students to meet the same standard, unless this was not feasible. In some cases exceptions made by teachers focused on students with disabilities. One middle school Social Studies teacher reported "I have different standards for (target student) and two other people in the class." Another noted "I would tend to

mark the students who are in the resource room a little differently." Or, students who demonstrated effort were not allowed to fail. A middle school Social Studies teacher said "If students try and try their best they will receive a minimal grade of D not F."

Teachers who reported making exceptions for some students fell between teachers with uniform or individualized expectations on three of the variables associated with this dimension: large group ensemble, individual instruction, and reported use of modified assignments (see Table 4). They made the least use of large group parallel independent practice, and moderate use of large group demonstration.

Variables Not Loading

Three types of reported modifications did not load on any of the three components: modified seating and/or directions (reported by 13 teachers), one-to-one assistance from a peer (reported by eight teachers), and modifications to instruction.

Eleven teachers in this sample reported making instructional modifications. Illustrative examples of the types of instructional modifications included: use of hands-on activities, manipulatives and concrete presentation; greater structure; insuring that prerequisites were mastered; simplified or detailed explanations; demonstrations, role play, or pantomime; immediate feedback and reinforcement and varied instructional strategies.

Discussion

This research makes several contributions. First, it documents systematic differences between content and special area teachers in accommodations made for students with disabilities in general education classes. This difference is of note, since two concerns that have been raised in previous discussions of the REI were confirmed for the content area teachers in this sample, but

were less characteristic of special area teachers.

Specifically, a new finding of this study was that special area teachers used large group instruction much less often than content area teachers. Evidently, concern that general education teachers over-use large group instruction should be qualified on the basis of their subject matter.

Another concern about general education teachers, that they may fail to take responsibility for students with disabilities, was also found to be less true of special area teachers than content area teachers. While the majority of content area teachers reported that they relied on the special education teacher to make modifications for students with disabilities, no special area teachers gave this response. These data suggest that content area teachers have not assumed full responsibility for students with disabilities. More positively, the data show that special area teachers do assume greater responsibility for students with disabilities.

This study replicated two findings reported earlier. The vast majority of content area classes were organized into large group activities. As in previous research, small group and individualized instruction were used much less frequently than large group instruction by all types of teachers in this sample.

Compared to previous descriptive research, the present study used a more refined coding system with which to characterize grouping practices. Thus, another new finding of the present study was that small, collaborative instructional groupings were used only infrequently by the teachers in this sample. This is a concern, given the ample documentation of the efficacy of collaborative small groups as an integration strategy.

Another new contribution of this research is that it documented a pattern of differences in accommodations provided by teachers at elementary, middle and high school levels. Small group

instruction was used differently at the different levels; elementary teachers in this sample were least likely to utilize collaborative groups. At the same time, elementary teachers were most likely to use the modifications of extra attention to the student with disabilities from the general education teacher or an aide.

Previous research has suggested that general education teachers are often reluctant to make modifications for students with disabilities (Ammer, 1984). While this study found that many content area teachers relied upon modifications provided by a special education teacher, few teachers reported making no modifications for students with disabilities. In fact, a variety of modifications to instruction, assignments, and testing were reported by the teachers in this sample.

Elementary teachers were less likely to report that they did not modify instruction than were secondary teachers. This finding parallels Schumm and Vaughn's (1992) report that elementary teachers were more likely to make adaptations as they planned instruction for students with disabilities.

In this research, when teachers reported that they made no modifications, it was most often because in their view, the students required no modifications. Only one teacher in this sample reported that she did not modify her approach to teaching for any student. A reasonable conclusion from the present data is that the majority of general education teachers, especially elementary teachers, make some modifications for students with disabilities. This conclusion contrasts with that of earlier work (e.g., Ammer, 1984).

This research is unique in that it documents the extent to which teachers set uniform expectations for all students, made exceptions for students with disabilities, or individualized their

expectations for all students. These data provide clarification of what general education teachers expect, particularly during the most common grouping structure, large group instruction. In the past, researchers have relied upon evidence of large group instructional activities to suggest that the general education classroom is a relatively uniform experience for all students (Baker & Zigmond, 1990). This study contradicts that impression, by documenting that even in instances when the whole class was observed to be completing the same task, the majority of teachers in this sample did not hold students with disabilities to the same expectations as their peers. These differential expectations imply individualization, in that the teacher did not expect all students to complete the task in the same fashion, or to the same standard of mastery.

Further, our data suggest what can be viewed as a "trade-off strategy" between individual instruction and individual expectations. When teachers held uniform expectations for all students, they helped students to meet these expectations by providing more individual instruction to all students (typically while all students were engaged in parallel independent practice). A different pattern of accommodation activities were observed among teachers who held individualized expectations for all students. These teachers provided less individual instruction to all students and were more likely to engage students in large group ensemble activities. They were able to do this by individualizing their expectations, and also by providing more modified assignments for students with disabilities. A final group was teachers who made exceptions for some students.

Implications for Practice

These data suggest a number of implications for practice. The dimensions of teacher accommodations identified in this work can best be viewed as "reasonable hypotheses" with which to predict the accommodation practices of individual teachers. As such, these dimensions

could be the basis of a needs assessment that seeks to identify topics for general education teacher inservice education or for consultant teacher services.

For example, our data suggest that it is likely that many content area teachers need to consider alternatives to large group instruction and would profit from interventions designed to increase their responsibility for students with disabilities. Special area teachers are less likely to need such intervention. In fact, if a school wanted to use a "teachers helping teachers" model of staff development, our data suggest that many special area teachers could serve as role models, as they were most likely to use alternatives to large group instruction and to assume responsibility for students with disabilities. Special area teachers could be used to assist content area teachers in designing appropriate small group learning activities for their disciplines, such as lab work, document analysis, dramatization, or group problem solving.

Similarly, our data suggest that teachers at all levels should increase their use of collaborative, ensemble activities such as cooperative learning. Secondary teachers were more likely to use collaborative small group instruction, and could be encouraged to share their expertise with elementary teachers, who were the least likely to use ensemble small group work in this study. Elementary teachers are likely to be appropriate advisors to secondary teachers on how to provide extra teacher attention to students with disabilities, in that they were found to make greater use of this modification.

Finally, our data suggest that it may be profitable to engage teachers in a discussion of the instructional philosophy inherent in uniform expectations, individual expectations, or exceptions to uniform expectations. In this way, teachers may become aware of alternatives. More importantly, it seems useful to tailor discussions of other accommodation strategies around the

expectations that teachers have set for their students. A teacher who has uniform expectations for all students is likely to need to provide modifications such as extra instruction in order for students with disabilities to meet those expectations. In contrast, a teacher who has individual expectations and/or who individualizes assignments has the opportunity to use small and large group ensemble activities in order to foster acceptance of students with disabilities.

Implications for Research and Policy

This research clearly indicates that in future research and in discussions of policies such as the REI, care should be taken not to over-generalize. Patterns of accommodations distinguish content area teachers from special area teachers, and distinguish teachers at the elementary, middle, and high school levels. It is inaccurate and misleading to treat all general education teachers as similar in their accommodations of students with disabilities.

These conclusion would not have been reached had other methods of data collection and analysis been used. When the goals of research are descriptive, this research documents the utility of a methodology that links a relatively unconstrained system of data collection with an exploratory, multivariate system of data analysis.

Our unconstrained method of data collection allowed us to distinguish particular types of small and large group instruction. If these had been aggregated, then differences among teachers would have been obscured. We feel that it is particularly critical that future research consider the use of ensemble tasks, since these have the greatest empirical support as an integration strategy, and because these tasks seem most likely to foster social integration of students with disabilities.

Our multivariate approach has also identified certain limitations in previous research which future discussion of the REI should seek to avoid. Classroom observation data have been used to

support the claim that the general education environment is inappropriate for students with disabilities. However, observed classroom activities may be interpreted differently when an understanding of the teacher's expectations is also provided. Similarly, it is often assumed that more is better when it comes to modifications for students with disabilities. Yet there are circumstances when teachers judge that specific students require no modifications.

Triangulation of interview and observation data provided evidence of a moderate level of accuracy in teachers' reported use of modifications. These data suggest that it is reasonable for future research to rely on teacher report data.

Limitations

Two limitations constrain this research and suggest directions for future study. Because of the costs associated with extensive classroom observations, this research used a relatively small sample of teachers drawn from only two school districts. While these districts were chosen to represent a range of experiences with integration, there are undoubtably ways in which they are not representative of other districts.

By design, this research was exploratory in nature. Semi-structured observations may be less reliable than a pre-determined coding system. Similarly, open-ended interview questions are limited by teachers' interpretations of the questions, and recall. Teachers might have given different responses if presented with a comprehensive checklist and asked to select the modifications they provided to the target student with a disability.

To remedy these limitations, future research is needed which utilizes the dimensions identified in this study to structure more focused observations and teacher questionnaires and interviews. These measures could be readily administered to a broader sample of teachers,

resulting in an even more comprehensive view of the accommodations provided to students with disabilities.

Table 1

Principal Components Analysis (N = 48)

Variable	Component 1	2	3
Subject Area	-.81	.10	.07
Large Group Demonstration	.49	-.11	-.43
Large Group Discussion	.79	-.01	-.18
Small Group Discussion	.48	-.01	.18
Testing Modifications	.66	-.08	.27
Special Education Teacher Modifies	.87	.04	-.00
Building Level	.11	-.64	.08
Small Group Ensemble	-.13	-.40	.32
Small Group Stations	-.29	.68	.26
Small Group PIP	-.09	.48	.15
General Education Teacher Extra Help	.37	.52	-.13
Aide Attention Modification	-.17	.71	.22
No Modifications	-.39	-.53	-.02
Expectations	-.25	-.07	.46
Large Group Ensemble	-.14	.40	.56
Large Group PIP	.12	-.18	-.73
Individual Instruction	-.20	.11	-.68

Table 1 Continued

Modified Assignments	.06	.16	.45
Modified Seating/Directions	.05	.39	-.03
Peer Help Modification	.01	.10	-.38
Modified Instruction	.04	-.19	.17

Table 2

Accommodations Associated with Content and Special Subject Areas

Accommodation	Content Area	Special Area
Percentage of Classes Observed to Use Grouping Strategies		
	(n=25)	(n=23)
Large Group Demonstration	39	23
Large Group Discussion	59	03
Small Group Discussion	02	00
Percentage of Teachers Reporting Modifications		
	(n=25)	(n=25)
Testing Modifications	48	16
Special Ed Teacher Modifies	64	00

Table 3

Accommodations Associated with Elementary, Middle, and High School Teaching

Accommodation	Elementary	Middle	High
Percentage of Classes Observed to Use Grouping Strategies			
	(n=11)	(n=24)	(n=13)
Small Group PIP	11	04	00
Small Group Stations	16	00	00
Small Group Ensemble	00	18	10
Percentage of Teachers Reporting Modifications			
	(n=12)	(n=25)	(n=13)
No Modifications	08	20	31
Extra Help from Gnrl Ed Teacher	50	36	00
Aide Attention	42	00	15

Table 4

Accommodations Associated with Teacher Expectations

Accommodation	Uniform	Exceptions	Individualized
Percentage of Classes Observed to Use Grouping Strategies			
	(n=11)	(n=20)	(n=17)
Large Group PIP	61	39	46
Individual Instruction	44	29	20
Large Group Ensemble	07	11	18
Large Group Demonstration	41	39	16
Percentage of Teachers Reporting Modifications			
	(n=11)	(n=21)	(n=18)
Modified Assignments	18	19	28

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